SPECIFICATION AMENDMENTS

Please replace paragraph [0054] with the following amended paragraph:

[0054]   In accordance with further aspects of the invention, a coarse-grained OLSP scheduling mechanism employing signaling extensions to a GMPLS-based framework for a PBS network is provided. An overview of a GMPLS-based control scheme for a PBS network in which the signaling extensions may be implemented in accordance with one embodiment is illustrated in Figure 4. Starting with the GMPLS suite of protocols, each of the GMPLS protocols can be modified or extended to support PBS operations and optical interfaces while still incorporating the GMPLS protocols' various traffic-engineering tasks. The integrated PBS layer architecture include PBS data services layer 400 on top of a PBS MAC layer 401, which is on top of a PBS photonics layer 402. It is well known that the GMPLS-based protocols suite (indicated by a block 403 in Figure 4) includes a provisioning component 404, a signaling component 405, a routing component 406, a label management component 407, a link management component 408, and a protection and restoration component 409. In some embodiments, these components are modified or have added extensions that support the PBS layers 400-402. Further, in this embodiment, GMPLS-based suite 403 is also extended to include an operation, administration, management and provisioning (OAM&P) component 410. ~~Further information on GMPLS architecture can be found at~~ ~~http://www.ietf.org/internet-drafts/draft-ietf-ccamp-gmpls-architecture-07.txt.~~ ~~In~~ ~~addition, a functional description of basic GMPLS signaling can be found at~~ ~~http://www.ietf.org/rfc/rfc3471.txt.~~

Please replace paragraph [0055] with the following amended paragraph:

[0055] In accordance with one aspect of the invention, signaling component 405 can include extensions specific to PBS networks such as, for example, burst start time, burst type, burst length, and burst priority, *etc.* As described in further detail below, GMPLS signaling extensions are disclosed for enabling reservation scheduling using the RSVP-TE (ReSerVation Protocol – Traffic Engineering) protocol. Link management component 408 can be implemented based on the well-known link management protocol (LMP) (that currently supports only SONET/SDH networks), with extensions added to support PBS networks. Protection and restoration component 409 can, for example, be modified to cover PBS networks. ~~Further information on LMP can be found at http://www.ietf.org/internet-drafts/draft-ietf-ccamp-lmp-09.txt.~~

Please replace paragraph [0058] with the following amended paragraph:

[0058] [[In]] <u>An</u> important aspect of the present invention pertains to label signaling, whereby coarse-grain lightpaths are signaled end-to-end and assigned a unique PBS label. The PBS label has only lightpath segment significance and not end-to-end significance. In exemplary PBS label format 500 is shown in Figure 5 with its corresponding fields, further details of which are discussed below. The signaling of PBS labels for lightpath set-up, tear down, and maintenance is done through an extension of IETF (Internet Engineering Task Force) Resource Reservation Protocol-Traffic Engineering (RSVP-TE). ~~More information on GMPLS signaling with RSVP-TE extensions can be found at http://www.ietf.org/rf/rfc3473.txt.~~